

JCM TRAINING OVERVIEW

VEGA™ Banknote Acceptor

IACET Industry Certified

JCM TRAINING LABS

Quality Service Training

Phone # (800) 683-7248
(702) 651-0000

Technical Support # (702) 651-3444

Fax # (702) 651-0214

E-mail techsupport@jcmglobal.com
Web Address <http://www.jcmglobal.com>



VEGA™ Banknote Acceptor

Table of Contents

	Page
Overview	3
VEGA Unit	3
VEGA Features	4
User Precautions	5
Component Locations	6
Component Names	6
Installation	7
VEGA SH Unit	7
VEGA SU/SD Unit	7
VEGA SU/SD Unit (Continued 1)	8
VEGA SU/SD Unit (Continued 2)	9
DIP Switch Settings	10
Functional Testing	11
DIP Switch Test	11
Feed Motor Forward Rotation Test	11
Feed Motor Reverse Rotation Test	12
Stacker Motor Test	12
Aging Test	13
Sensor Test	13
Sensor Test (Continued)	14
Software Download Procedure	15
Software Download Procedure (Continued 1)	16
Software Download Procedure (Continued 2)	17
Non-PC Calibration Procedures	18
Non-PC Calibration Procedures (Continued)	19
Off-Line Banknote Acceptance Test	20
Error and Reject Code Tables	20
Error and Reject Code Tables (Continued)	21
VEGA Parts List	22

OVERVIEW

This training course addresses the following JCM VEGA™ device versions:

Table 1 Various VEGA Versions

Device	Capacity/Contents
VEGA 100	12V DC Power (NO Magnetic Sensor)
VEGA 101	12V DC Power / Magnetic Sensor (W)
VEGA 102	24V DC Power / NO Magnetic Sensor
VEGA 103	24V DC Power / Magnetic Sensor (J)
VEGA 104	24V DC Power / Magnetic Sensor (W)
VEGA 105	12V DC Power / Magnetic Sensor (J)

VEGA UNIT

Figure 1 illustrates a typical VEGA Currency Validation Unit.



Figure 1 Typical VEGA Unit

Lecture Notes

USER PRECAUTIONS

The following User precautions should be observed when installing, operating and servicing a VEGA Unit:

- When closing the Upper portion of the Transport path or the Course Path Reversing Guide Cover, ensure that it clicks firmly into place
- Turn the VEGA's Power OFF when opening the Upper Section of the Lower Guide; otherwise, the Rollers may begin operating and personal injury to fingers may occur by having them pulled into the Unit
- Be careful to avoid personal injury to your fingers when closing the Upper Guide Section
- Clean the VEGA Unit once a Month to keep its performance stable and avoid degraded Banknote acceptance
- Use a lint-free cloth or Cotton Swabs to carefully remove dirt on the Sensors, and to remove any Paper powder dust adhering to the Rollers
- Under no circumstances allow a cleaning cloth to be wet enough to allow excess fluid to run into the device; internal Printed Circuit Boards may be damaged. Do not use Alcohol, citrus based cleaners, solvents or scouring agents that can damage the plastic surfaces of the device
- Do not re-design or disassemble the VEGA Validator. Unauthorized use by inadequately trained personnel, or use outside the original Manufacturer's intent for operation voids the warranty
- Do not inject water or liquid agents of any kind into the Validator; as this may cause extreme damage to the Unit.

Lecture Notes

COMPONENT LOCATIONS

Component Names

Figure 2 illustrates the VEGA Component Names and Locations.

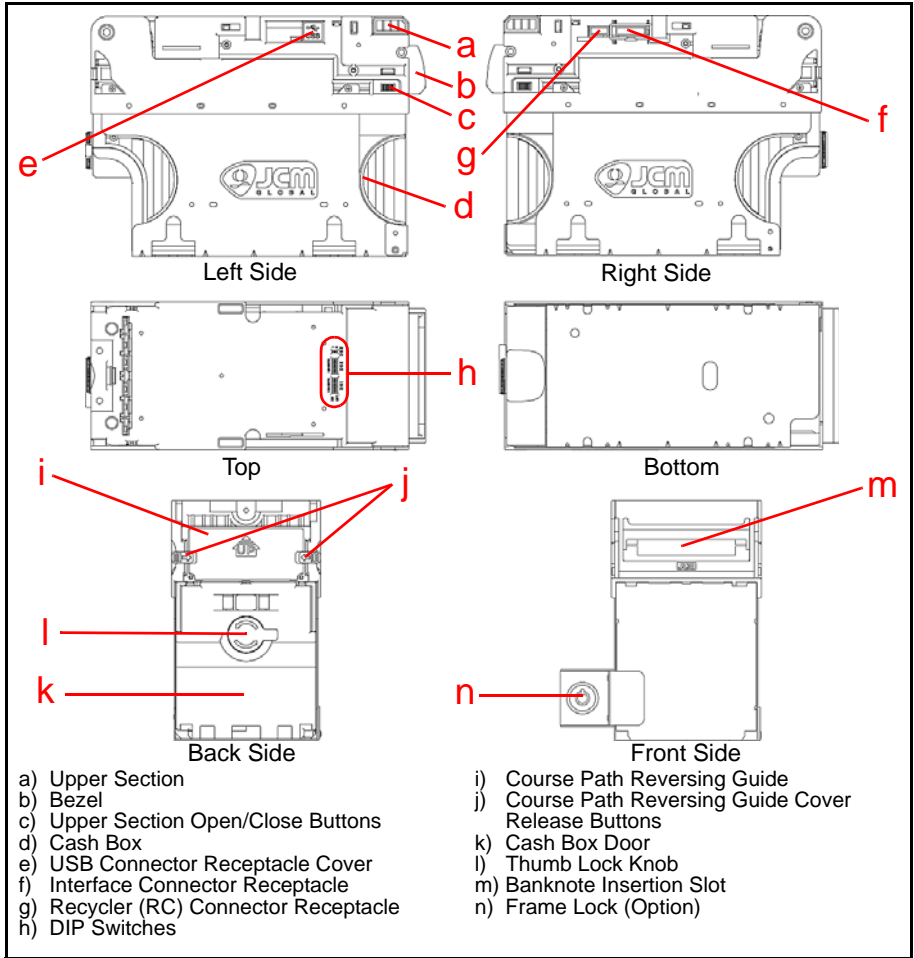


Figure 2 VEGA Component Names

Lecture Notes

INSTALLATION

VEGA SH UNIT

Perform the following steps to install a VEGA SH Unit into a Host Machine:

1. Mount the VEGA SH Unit in place without the Cash Box installed.
2. Bolt the bottom of the VEGA Frame into place using four (4) M4 Hex-nuts (See Figure 3 a₁, a₂, a₃ & a₄).



NOTE: The bolt lengths are not to extend more than 5mm up from the ground plane.

3. Set the VEGA DIP Switches to On-line Mode (Refer to "DIP Switch Settings" on page 10 of this Guide).



NOTE: Refer to Figure 3b to locate the DIP Switches on the VEGA Unit.

4. Connect the VEGA Unit to the Host Machine using the User supplied harness.
5. Apply power to the VEGA Unit.
6. Activate the VEGA Unit normally, and confirm that the LED lighting sequence indicates an active idle mode Color pattern as set by DIP Switch selection.

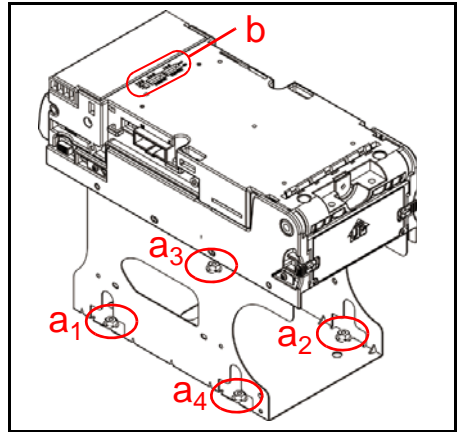


Figure 3 M4 Nut and DIP Switch Locations

VEGA SU/SD UNIT

Perform the following steps to install a VEGA SU/SD Unit into a Host Machine.

1. Set the VEGA DIP Switches to On-line Mode (Refer to "DIP Switch Settings" on page 10 of this Guide).
2. Connect the VEGA to the Host Machine using a User supplied Harness.
3. Apply power to the VEGA Unit.
4. Activate the VEGA Unit normally, and confirm that the LED lighting sequence indicates an active Idle Mode Color pattern as set by DIP Switch selection.
5. Turn the VEGA Unit's power OFF and disconnect the Harness between the VEGA and the Host Machine.

Lecture Notes

VEGA SU/SD Unit (Continued 1)

6. Connect the attached Bezel Plate (See Figure 4 a) on the VEGA SD/SU Bracket (See Figure 4 b) using two (2) M4 screws (See Figure 4 c₁ & c₂).
7. Mount the VEGA SD/SU Bracket into place on the Host Machine using two (2) M4 Hexnuts (See Figure 4 d₁ & d₂).



NOTE: The bolt lengths should not extend more than 15mm upward from the Host Machines base.

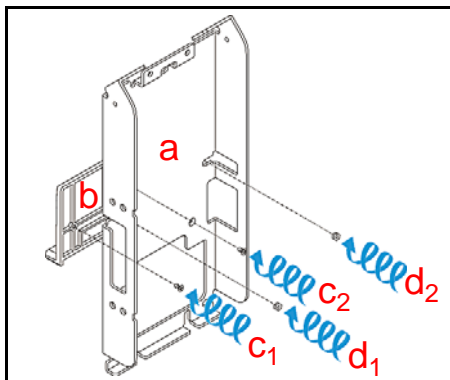


Figure 4 M4 Nut and DIP Switch Locations

8. Remove the Course Path Reversing Guide and bolt the VEGA SD/SU Unit into the VEGA SD/SU Bracket on the Host Machine using two (2) M4 Screws (See Figure 5 a₁ & a₂) and two (2) or four (4) M4 Hexnuts (See Figure 5 b₁, b₂, b₃, & b₄).



NOTE: The number of Screws required depends on each Host Machine's specification requirements.

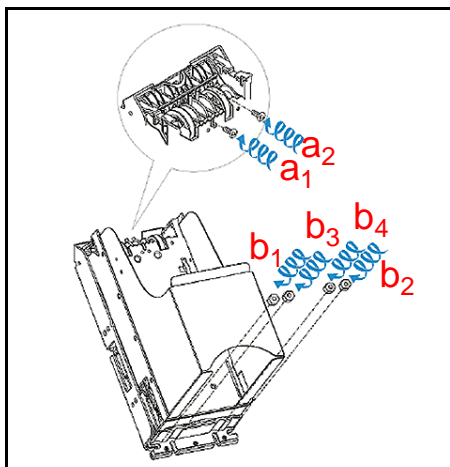


Figure 5 M4 Screw and Nut Locations

9. Seat the Cash Box (See Figure 6 a) into the frame and replace the Course Path Reversing Guide cover on the Upper Section (See Figure 6 b).

Lecture Notes

DIP SWITCH SETTINGS

The VEGA Banknote Validator contains three (3) DIP Switch Blocks (i.e., DS1, DS2, and DS3). They are located in the center of the top of the Unit approximately two (2) inches from the front of the Unit (Review Figure 2 h).

- DIP Switch Block DS1 is used to select Test Mode, and to select the desired Banknote Acceptance/Inhibit settings shown in Table 2.
- DIP Switch Block DS2 is used to select between the desired Communications Interface Protocols shown in Table 3.
- DIP Switch Block DS3 selects between the RS232C and Pulse Interface Communication Protocols shown in Table 4.

Table 2 DIP Switch Block 1 Settings

Switch No.	Switch ON	Switch OFF
1	Test Mode	Basic Performance
2	Refer to the Related Country's Software Specification Sheet	
3		
4		
5		
6		
7		
8		

Table 3 DIP Switch Block 2 Settings

Switch No.	Switch ON		Switch OFF	
1	Refer to the Related Country's Software Specification Sheet			
2				
3				
4				
5				
6	6	7	8	IF Setting
	OFF	OFF	OFF	ID-003 Serial (RS-232C)
7	OFF	ON	ON	ID-003 (Photo-Coupler Isolation)
	OFF	ON	OFF	ccTalk (Non-Encrypted)
	ON	ON	OFF	ccTalk (Encrypted)
8	ON	OFF	ON	ccTalk (Simple Checksum)
	ON	OFF	OFF	MDB

Table 4 DIP Switch Block 3 Settings

Switch No.	Switch ON	Switch OFF
1	RS232C Interface	Pulse Interface

Lecture Notes

FUNCTIONAL TESTING

DIP SWITCH TEST

Perform the following steps to test the functionality of each DIP Switch Block:

1. Ensure that the VEGA's Power is OFF.
2. Set all DIP Switches on DS 1 and DS 2 to the ON position.
3. Apply Power to the VEGA.
4. Set DS 1, Switch #1 to OFF. The Front Panel LED will go out (Extinguish).
5. Set DS 1 Switches #3, #5, & #7 and DS 2 Switches #1, #3, #5, & #7 to OFF. The Front Panel LED will blink at a **Yellow** Color Rate.
6. Set DS1 and DS2 Switches #2, #4, #6, & #8 to OFF. The Front Panel LED will blink at a **Blue** Color Rate if all the DIP Switches function properly.

FEED MOTOR FORWARD ROTATION TEST

Perform the following steps to test the normal forward rotation functionality of the Feed Motor:

1. Ensure the VEGA's Power is OFF.
2. Set DS1, Switch #1 ON.
3. Apply Power to the VEGA.
4. Set DS1, Switch #1 OFF. This begins the Feed Motor Forward Rotation Test.
5. If the Feed Motor correctly rotates forward, the Front Panel LED will remain extinguished (Out) and forward rotation will continue.
6. To end the Test, Set DS 1 Switch #1 to ON.



NOTE: If the Front Panel LED blinks any White sequence in Table 5, the Feed Motor Forward Rotation is abnormal.

Table 5 Transport Motor Abnormal Error Codes

LED Color	Blink Sequence	Error Indication
White	3	Feed Motor Low Speed Problem
	5	Feed Motor High Speed Problem
	7	Feed Motor Lock-up Problem

Lecture Notes

FEED MOTOR REVERSE ROTATION TEST

Perform the following steps to test the normal reverse rotation functionality of the Feed Motor:

1. Ensure the VEGA's Power is OFF.
2. Set DS1, Switches #1, & #2 ON.
3. Apply Power to the VEGA.
4. Set DS1, Switch #1 OFF. This begins the Feed Motor Reverse Rotation Test.
5. If the Feed Motor rotates in reverse correctly, the Front Panel LED will remain extinguished (Out) and reverse rotation will continue.
6. To end the test, set DS1, Switch #1 ON.



NOTE: If the Front Panel LED blinks any white sequence in Table 3, the Feed Motor Reverse Rotation is abnormal.

STACKER MOTOR TEST

Perform the following steps to test the Stacker motor functionality:

1. Ensure the VEGA's Power is OFF.
2. Set DS1, Switches #1, & #3 ON.
3. Apply Power to the VEGA.
4. Set DS1, Switch #1 OFF. This begins the Stacker Motor Test.
5. If the Stacker Motor rotates correctly, the Front Panel LED will remain extinguished (Out) and the Motor will continue operating.
6. To end the test, set DS1, Switch #1 ON.



NOTE: If the Front Panel LED blinks any error sequence listed in Table 6, the Stacker Motor's Rotation is abnormal.

Table 6 Stacker Motor Error Codes

LED Color	Blink Sequence	Error Indication
RED	5	Cash Box Seating Problem
PURPLE	5	Stacker Motor Lock-up
	7	Stacker Motor Gear Problem
ORANGE	3	Stacker Full

Lecture Notes

AGING TEST

Perform the following steps to repeatedly test the VEGA's basic feeding, transporting, and stacking functions:

1. Ensure the VEGA's power is OFF.
2. Set DS1, Switches #1, #2 & #4 ON.
3. Apply power to the VEGA.
4. Set DS1, Switch #1 OFF. This begins the Aging Test.
5. If operation is normal, the Unit will perform the following five functions repetitively:
 - a. Feed Motor Reverse Rotation
 - b. Interval Test (20 sec. LED Lights White)
 - c. Feed Motor Forward Rotation
 - d. Stacking Test
 - e. Interval Test (20 sec. LED Lights White).
6. To end the test, set DS1, Switch #1 ON.



NOTE: If the Front Panel LED blinks any error sequence listed in Table 7, the Stacker Motor's Rotation is abnormal.

Table 7 Stacker Motor Error Codes

LED Color	Blink Sequence	Error Indication
WHITE	3	Feed Motor Low Speed Problem
	5	Feed Motor High Speed Problem
	7	Feed Motor Lock-Up
RED	5	Cash Box Seating Problem
PURPLE	5	Stacker Motor Lock-up
	7	Stacker Motor Gear Problem
ORANGE	3	Stacker Full

SENSOR TEST

Perform the following steps to verify if the eight (8) Sensors within the VEGA are functional:

1. Ensure the VEGA's power is OFF.
2. Set DS1, Switches #1, #2, #3, #4 & #5 ON.
3. Apply power to the VEGA.
4. Set DS1, Switch #1 OFF. This begins the Sensor Test.

Lecture Notes

Sensor Test (Continued)

Table 8 lists the DS2 settings for the Sensor Test configuration. Select the intended Sensor from the Table, and set the DS2 Switches according to the Table Switch positions.

Table 8 DIP Switch Block DS2 Sensor Configuration Settings

DIP Switch Block DS2									Yellow LED State	
Sensor	1	2	3	4	5	6	7	8	Lit	Extinguished
Entrance Sensor	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	With Paper (Light Interception)	No Paper (Transmissive)
Validation Sensor	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	With Paper (Light Interception)	No Paper (Transmissive)
Side Sensor	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	With Paper (Light Interception)	No Paper (Transmissive)
Escrow Sensor	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	With Paper (Light Interception)	No Paper (Transmissive)
RC Flap Sensor	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	With Paper (Transmissive)	No Paper (Light Interception)
Stacker Flap Sensor	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	With Paper (Transmissive)	No Paper (Light Interception)
Stack-In Sensor	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	With Paper (Light Interception)	No Paper (Transmissive)
Box Sensor	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	With Paper (Light Interception)	No Paper (Transmissive)

- When the selected Sensor detects an object, the Front Panel LED Display will blink at a **Yellow** Color Rate. Otherwise, the Front Panel LED will be extinguished (Out).

Lecture Notes

SOFTWARE DOWNLOAD PROCEDURE

Perform the following steps to download the VEGA Operating Software Program (Refer to Figure 7 for the Tool Requirements and Harness Connector locations).

However, before downloading the VEGA Software Program, copy the Downloader Program (UBA Downloader Version 2.10: specified), and the VEGA Operating Software Program into a VEGA Folder ([C:\VEGA]) created on the PC.

1. Turn Power to the VEGA Unit OFF.
2. Set DS 1, Switches #1, #7, & #8 ON.



NOTE: DIP Switch Block No. 2 and No. 3 settings are not required for this Software Download

3. Apply Power to the VEGA Unit.
 4. Confirm that the Front Panel LED blinks at a **Green** Color Rate.
 5. Launch the copied Downloader Program (UBA Downloader Version 2.10: Specified) from the PC VEGA Folder ([C:\VEGA]).
- The Program Installation Screen shown in Figure 8 will appear.

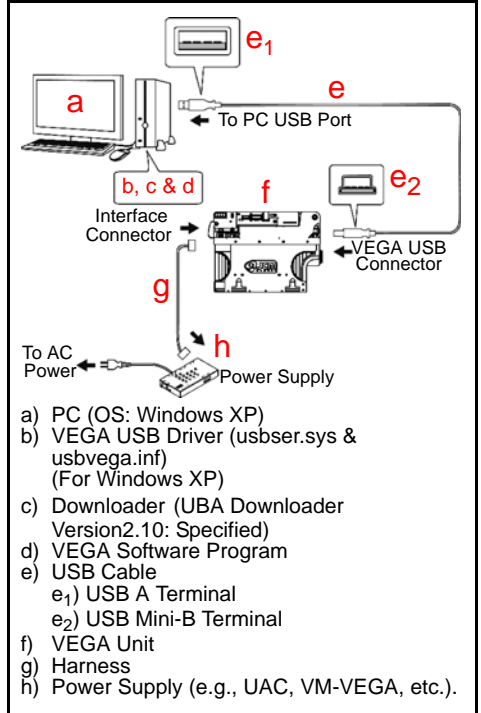


Figure 7 Tools and Harness Connection

Lecture Notes

SOFTWARE DOWNLOAD PROCEDURE (CONTINUED 1)

6. Mouse-click the "Browse" Screen Button (See Figure 8 a) and select the desired VEGA Software for download into the VEGA Flash Memory; then,
7. Mouse-click on the "Open" Screen Button (See Figure 9 a) to launch the selected file.

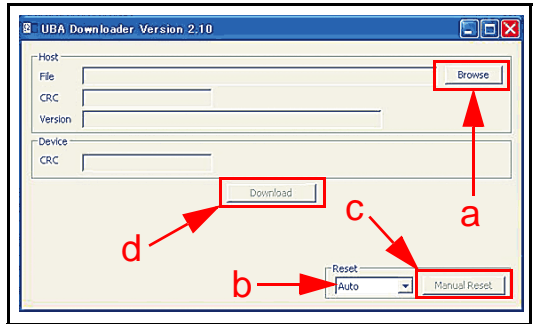


Figure 8 UBA Downloader Screen

8. When the UBA Downloader Screen re-appears, Mouse-click on the Center "Download" Screen Button (Review Figure 8 d) to begin the Software download into the VEGA Flash Memory (See Figure 10 a). The Downloading Screen will display a Progress Barograph during the download operation (See Figure 10 b).

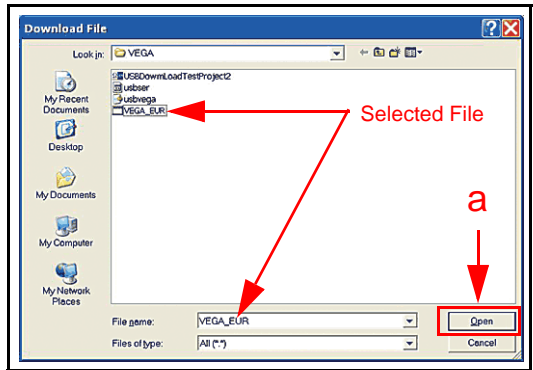


Figure 9 UBA Downloader File Select Screen



NOTE: The Front Panel LED lights **Yellow** during a download.

Lecture Notes

SOFTWARE DOWNLOAD PROCEDURE (CONTINUED 2)

9. Once the download is complete, the Front Panel LED Display turns a steady **Blue** Color, and then the VEGA returns to a Start-up Process condition (e.g., the Front Panel LED Display blinks at a **Green** Color rate).
10. When the download is complete, confirm that the Host's Checksum and the Device's Checksums match each other

(e.g. [CRC:XXXX = CRC:XXXX]).



NOTE: If the Host and the Device CRC Checksums do not match, the download did not end correctly. Confirm that the download procedure is correct, and re-perform the download procedure again.

11. After verifying a CRC match between both Checksums, Mouse-click on the "OK" Dialog Screen Button to close the UBA Downloader Program Screen.



NOTE: If the word "Manual" appears in the "Reset" Pull-down Menu (Review Figure 8 b); the Front Panel LED will sustain a steady **Blue** Color. In this case, Return to the Start-up condition by pressing the adjacent "Manual reset" Screen Button (Review Figure 8 c) located to the right of the pull-down Menu (The Front Panel LED will then blink at a **Green** Color Rate).



NOTE: If a download error occurs, the Front Panel LED will light a **Red** Color.

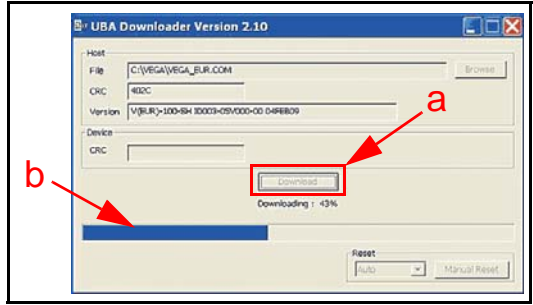


Figure 10 UBA Downloader Progress Bar Screen

Lecture Notes

NON-PC CALIBRATION PROCEDURES

When removing or replacing the Sensor, Sub-Sensor, or CPU Board, perform the following steps to calibrate the Entrance, Validation, and Edge Sensors of the VEGA Unit.



NOTE: If any of the Sensors are dirty the calibration will not be accurate. Be sure to clean all the Sensors before calibrating the Unit.



NOTE: There are two types of Calibration Procedures:

- Calibration using a PC, and
- Calibration without using a PC.

To calibrate using a PC, refer to the VEGA Operation and Maintenance Manual, Section 6, Page 6-6.

1. Figure 11 illustrates the Calibration connection Tools and Harness configurations necessary when calibrating WITHOUT using a PC.
2. Set DS 1, Switches #1, #2, & #8 to ON. Ensure ALL DS 2 Switches are OFF.
3. Apply power to the VEGA and the Front Panel LED will blink **Green**.
4. Set DS 1, Switch #1 OFF.
5. The Front Panel LED will now slowly blink at a **Cyan** Color rate.

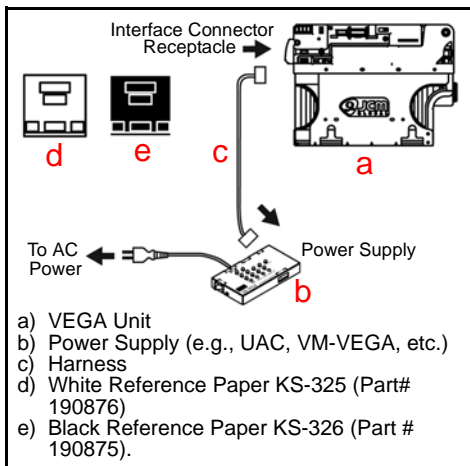


Figure 11 Non-PC Calibration Tools and Cabling



NOTE: Do not touch the VEGA Unit while it's adjusting.

6. Set DS 2, Switch #1 ON.
 This action begins the Entrance Sensor's Adjustment Procedure without Reference Paper in Place.



NOTE: Keep DS 2 Switches ON until instructed to turn them OFF.

7. The Front Panel LED will slowly blink at a White Color Rate once the Entrance Sensor's adjustment is complete.

Lecture Notes

NON-PC CALIBRATION PROCEDURES (CONTINUED)

8. Set the White Reference Paper in place.
9. Set DS 2, Switch #2 to ON to begin the Validation Sensor Adjustment.
10. The White Reference Paper Adjustment is complete when the Front Panel LED blinks at a **Blue** Color Rate.
11. Remove the White Reference Paper.
12. Set the Black Reference Paper.
13. Set DS 2, Switch #3 to ON to begin the Validation Sensor's Adjustment with the Black Reference Paper.
14. The Black Reference Paper adjustment is complete when the Front Panel LED blinks at a **Purple** Color Rate.
15. Remove the Black Reference Paper.
16. Set DS 2, Switch #4 to ON to re-perform the Validation Sensor's Non-paper adjustment.
17. The Validation Sensor's Non-paper adjustment is complete when the Front Panel LED blinks at a **Green** Color Rate.
18. Set DS 2, Switch #5 to ON to begin the Edge Sensor's Non-paper Adjustment.
19. The Edge Sensor's Non-paper Adjustment is complete when the front Panel LED blinks at a **Yellow** Color Rate.
20. Set DS 2, Switches #1, #2, #3, #4, & #5 OFF in order to write these adjustments into the VEGA's EEPROM Memory.
21. The adjustments are successfully written into the Memory when the Front Panel LED blinks at a **Green** Color Rate.
22. Remove power from the VEGA Unit.



*NOTE: If the adjustment of any Sensor fails, the Front Panel LED will blink **Red**. See Table 9 for Error Indications.*

Table 9 Sensor Adjustment Error Conditions

LED Color	Blink Sequence	Error Indication
RED	1 Blink	The Entrance Sensor adjustment has failed.
	2 Blinks	The Entrance Sensor adjustment using White Reference Paper has failed.
	3 Blinks	The Validation Sensor adjustment using Black Reference Paper has failed.
	4 Blinks	The Validation Sensor's Non-Paper adjustment has failed.
	5 Blinks	The Edge Sensor adjustment has failed.
	6 Blinks	The EEPROM data writing process has failed.

Lecture Notes

OFF-LINE BANKNOTE ACCEPTANCE TEST

Perform the following steps to perform the VEGA's Off-Line Banknote Acceptance Test.

1. Ensure the VEGA's power is OFF.
2. Set DS1, Switches #1, #3 & #5 ON.
3. Apply power to the VEGA.
4. Set DS1, Switch #1 OFF. This begins the Off-line Banknote Acceptance Test.

Wait for the Front Panel LED to indicate Stand-by Mode, and then insert Banknotes. Specific denominations are identified by Front Panel LED blink sequences. Refer to the specific Country's Software Information Sheet for acceptable denomination value settings.



NOTE: If an Error or Reject condition occurs, refer to Table 10 or Table 11 respectively to identify the cause of the malfunction.

Error and Reject Code Tables

Table 10 lists the various VEGA Error Code LED combinations.

Table 10 LED Error Codes

On-Line	Off-Line	Error	Possible Cause
Color Flashes (mSec)	Color Flashes (mSec)		
Yellow 1 (300)	Yellow 1 (300)	ROM Error	ROM malfunction. Re-download Software. Change the CPU Circuit Board.
Yellow 2 (300)	Yellow 2 (300)	RAM Error	RAM malfunction. Change the CPU CircuitBoard
Red 3 (300)\	White 3 (300)	Feed Motor Low Speed	During Feed Motor operation, no pulse input exists greater than the rated value.
Red 3 (300)\	White 5 (300)	Feed Motor High Speed	During Feed Motor operation, no pulse input exists greater than the rated value.
Red 3 (300)\	White 7 (300)	Feed Motor Lock-up	During Feed Motor operation, no pulse input exists greater than the rated value.
Red 3 (300)\	Purple 5 (300)	Stacker Motor Lock-up	During Stacker Motor operation, no pulse inputs exist greater than the rated value.
Red 3 (300)\	Purple 7 (300)	Stacker Motor Gear Problem	Pusher Mechanism stays in its home position while Stacker Motor is operating.
Red 3 (300)\	Blue 5 (300)	Banknote Transport Slips	An abnormal Banknote transport error occurs when transporting or rejecting Banknotes.
Red 3 (300)\	Blue 7 (300)	Transport Times Out	Transportation locks-up or runs to slow.
Red 3 (300)\	Red 3 (300)	Abnormal Timing Response	Sensors detect Banknotes remain in-path or none exist during abnormal timing.
Red 3 (300)\	Red 5 (300)	Cash Box Seating	Cash Box Sensors detected a Banknote remains in-path or a Cash Box is not properly seated
Red 3 (300)\	Purple 3 (300)	Pusher Mechanism Position	Pusher Mechanism Home Sensor detected that the Pusher Mechanism is not presently seated at the Home end position.
Red 3 (300)\	Orange 3 (300)	Stacker Full	When the Pusher Mechanism moves toward stacking, the Stacker-Full Sensor determined that the time taken is longer than the specified value for the function.
Red 3 (300)\	Cyan 3 (100)	Operational Pause	Intake Sensor detects a Banknote at a position where it cannot be returned while in the transport process.

Lecture Notes

Error and Reject Code Tables (Continued)

Table 11 lists the various VEGA Reject Code LED combinations.
Table 11 LED Reject Codes

On-Line	Off-Line	Error	Possible Cause
Color Flashes (mSec)	Color Flashes (mSec)		
Yellow 3 (120)	White 3 (300)	Transport Slip	Sensor does NOT detect Banknote even though the number of Banknotes transported is more than the accepted value.
Yellow 3 (120)	Red ON	Transport Time-out	Sensors do NOT detect movement even though Banknote transport time is longer than acceptable.
	Yellow ON		
	Red 3 (120)		
Yellow 3 (120)	Blue ON	Transport Motor Lock-up	While the Feed Motor is operating, no pulse inputs exist greater than the rated value.
	Yellow ON		
	Blue 3 (120)		
Yellow 3 (120)	Green ON	Transport Speed High	While performing the transportation process, pulse interaction was shorter than the accepted value.
	Purple ON		
	Green 3 (120)		
Yellow 3 (120)	Red 3 (120)	Abnormal Timing Response	Sensor detected a Banknote remaining in path or none present during an abnormal timing interval.
Yellow 3 (120)	Yellow ON	Side Sensor Problem	Side Sensor detected a Banknote before it passed through Guide Sensor and after it passed the Side Sensor.
	White ON		
	Yellow 3 (120)		

Lecture Notes

VEGA PARTS LIST

Part Number	Description
• 190876	Reference Paper (White: KS-325)
• 190875	Reference Paper (Black: KS-326)
• 302-100011R	USB Male 'A' to USB 'Mini-B' Cable
• 501-100218R	UAC Module
• 400-100669R	UAC Adapter Harness (ID-003)
• G00249	UAC Adapter Harness (ID-0E3)
• 302-100007RA	Power Cord (USA Version)
• G00286	DC Adapter

Thank You for choosing JCM products.

Lecture Notes

PERSONAL NOTES AND COMMENT AREA

Write any pertinent notes or comments regarding your particular installation here.

Lecture Notes

JCM is a registered trademark of JCM American Corporation. All other product names mentioned herein may be registered trademarks or trademarks of their respective companies. Furthermore, ™, ® and © are not always mentioned in each case throughout this publication.



925 Pilot Road, Las Vegas, Nevada 89119

Office & Technical Support: (800) 683-7248 (option 1 after hours), FAX: (702) 651-0214

E-mail: techsupport@jcmglobal.com

<http://www.jcmglobal.com>